Coordinating Agencies:

Department of Defense
Department of Energy
Department of Homeland Security
Department of Homeland Security/
U.S. Coast Guard
Environmental Protection Agency
National Aeronautics and Space
Administration
Nuclear Regulatory Commission

Cooperating Agencies:

Department of Agriculture
Department of Commerce
Department of Defense
Department of Energy
Department of Health and Human Services
Department of Homeland Security
Department of the Interior
Department of Justice
Department of Labor
Department of State
Department of Transportation
Department of Veterans Affairs
Environmental Protection Agency
Nuclear Regulatory Commission

INTRODUCTION

Purpose

The Nuclear/Radiological Incident Annex provides an organized and integrated capability for a timely, coordinated response by Federal agencies to incidents involving nuclear or radioactive materials, including acts of terrorism. These incidents may vary in severity from the simple to those of such severity, magnitude, and/or complexity that a coordinated Federal response is needed to supplement the State, tribal, or local response.

This annex describes how Federal agencies respond to nuclear/radiological incidents. Some of these agencies bring unique authorities, technical expertise, and assets for responding to nuclear/radiological incidents that are not otherwise described in the *National Response Framework (NRF)*. In addition, this annex describes how these Federal agencies support the Department of Homeland Security (DHS) when it is coordinating the overall multiagency Federal response to nuclear/radiological incidents.

Scope

This annex applies to nuclear/radiological incidents, including sabotage and terrorist incidents, involving the release or potential release of radioactive material that poses an actual or perceived hazard to public health, safety, national security, and/or the environment. This includes terrorist use of radiological dispersal devices (RDDs) or improvised nuclear devices (INDs) as well as nuclear facility accidents (commercial or weapons production facilities), lost radioactive material sources, transportation accidents involving nuclear/radioactive material, domestic nuclear weapons accidents, and foreign accidents involving nuclear or radioactive material that impact the United States or its territories, possessions, or territorial waters.

The level of Federal response to a specific incident is based on numerous factors, including the ability of State, tribal, and local officials to respond; the type, amount, and custody of radioactive material involved; the extent of the impact or potential impact on the public and environment; and the size of the affected area.

In situations where threat analysis includes indications that a terrorist incident involving radiological materials could occur, actions are coordinated in accordance with the preincident

prevention protocols set forth in the *NRF* and the Terrorism Incident Law Enforcement and Investigation Annex.

This annex:

- Provides planning guidance and outlines operational concepts for the Federal response to any nuclear/radiological incident, including a terrorist incident, that has actual, potential, or perceived radiological consequences within the United States or its territories, possessions, or territorial waters, and that requires a coordinated response by the Federal Government.
- Acknowledges the unique nature of a variety of nuclear/radiological incidents and the responsibilities of Federal, State, tribal, and local governments to respond to them.
- Describes Federal policies and planning considerations on which this annex and Federal agency-specific nuclear/radiological response plans are based.
- Specifies the roles and responsibilities of Federal agencies for preventing, preparing for, responding to, and recovering from nuclear/radiological incidents.
- Includes guidelines for notification, coordination, and leadership of Federal activities.
- Describes Federal Government capabilities including the Interagency Modeling and Atmospheric Assessment Center (IMAAC), the Federal Radiological Monitoring and Assessment Center (FRMAC), and the Advisory Team for Environment, Food, and Health (known as "the Advisory Team"). More information on these capabilities is included in subsequent sections of this annex.

Policies

The concept of operations described in this annex recognizes and addresses the unique challenges associated with and the need for specialized technical expertise/actions when responding to nuclear/radiological incidents (including RDD/INDs).

DHS/Federal Emergency Management Agency (FEMA) is responsible for maintaining and updating this annex. DHS/FEMA accomplishes this responsibility through the Federal Radiological Preparedness Coordinating Committee (FRPCC).

When DHS initiates the response mechanisms of the *NRF*, including the Emergency Support Functions (ESFs) and this annex, existing interagency plans that address nuclear/radiological incident management (e.g., the National Oil and Hazardous Materials Contingency Plan (NCP)) are incorporated as supporting plans and/or operational supplements to the *NRF*. For incidents of lesser severity, other Federal agency response plans provide the primary Federal response protocols.

Certain Federal agencies are authorized to respond directly to specific nuclear/radiological incidents. In these cases, procedures outlined in this annex may be used in accordance with National Incident Management System (NIMS) to coordinate the delivery of Federal resources to State, tribal, and local governments, and to coordinate assistance among Federal agencies for incidents requiring Federal coordination.

Nothing in this annex alters or impedes the ability of Federal departments and agencies to carry out their specific authorities and perform their responsibilities under law. This annex does not create any new authorities nor change any existing ones.

Federal response actions will be carried out commensurate with the appropriate health and safety laws and guidelines. For example, if appropriate personal protective equipment and capabilities are not available and the area is contaminated by radioactive material, response actions may be delayed until the material has dissipated to a safe level for emergency response personnel or until appropriate personal protective equipment and capabilities arrive.

Departments and agencies are not reimbursed for activities conducted under their own authorities unless other agreements or reimbursement mechanisms exist (e.g., Stafford Act, Federal-to-Federal assistance). Under the Homeland Security Act, DHS will provide funds to the Department of Energy (DOE) and the Environmental Protection Agency (EPA), as appropriate, for planning, exercises and training, and equipment for the Nuclear Incident Response Team (NIRT).

Federal coordination centers and agency teams provide their own logistical support consistent with agreed upon interagency execution plans. State, tribal, and local governments are encouraged to coordinate their efforts with the Federal effort, but maintain their own logistical support, consistent with applicable authorities and requirements.

Response to nuclear/radiological incidents affecting land owned by the Federal Government is coordinated with the agency responsible for managing that land to ensure that incident management activities are consistent with Federal statutes governing use and occupancy. In the case of tribal lands, tribal governments have a special relationship with the U.S. Government, and Federal, State, and local governments may have limited or no authority on specific tribal reservations. Further guidance is provided in the Tribal Relations Support Annex.

Planning Assumptions

Radiological incidents may not be immediately recognized as such until the radioactive material is detected or the effects of radiation exposure are manifested in the population.

An act of radiological terrorism, particularly an act directed against a large population center within the United States, can have major consequences that can overwhelm the capabilities of many local, tribal, and/or State governments to respond and may seriously challenge existing Federal response capabilities.

An act of nuclear or radiological terrorism will trigger concurrent activation of the Terrorism Law Enforcement and Investigation Annex.

A radiological incident may require concurrent implement of the NCP to address radiological, as well as chemical or biological, releases into the environment.

An incident involving the potential release of radioactivity may require implementation of protective measures.

An expeditious Federal response is required to mitigate the consequences of the nuclear/radiological incident. Radiological incidents that result in significant impacts likely will trigger implementation of the *NRF* Catastrophic Incident Annex. The Federal Government response to radiological terrorist threats/incidents also includes the following assumptions:

- The response to a radiological threat or actual incident requires an integrated Federal Government response.

- In the case of a radiological terrorist attack, the effect may be temporally and geographically dispersed, requiring response operations to be conducted over a multijurisdictional, multistate region.

- A radiological terrorist incident may affect a single location, or multiple locations, each of which may require an incident response and a crime scene investigation simultaneously.

HAZARD-SPECIFIC PLANNING AND PREPAREDNESS

Headquarters Planning and Preparedness

The Federal Radiological Preparedness Coordinating Committee provides a national-level forum for the development and coordination of radiological prevention and preparedness policies and procedures. It also provides policy guidance for Federal radiological incident management activities in support of State, tribal, and local government radiological emergency planning and preparedness activities. The FRPCC is an interagency body consisting of the coordinating and cooperating agencies discussed in this annex, chaired by DHS/FEMA. The FRPCC establishes subcommittees, as necessary.

The FRPCC also coordinates research study efforts of its member agencies related to State, tribal, and local government radiological emergency preparedness to ensure minimum duplication and maximum benefits to State and local governments. The FRPCC coordinates planning and validating requirements of each agency, reviewing integration requirements and incorporating agency-specific plans, procedures, and equipment into the response system.

As part of their preparedness for nuclear/radiological emergencies, Federal agencies participate in exercises to test and evaluate response plans.

Regional Planning and Preparedness

Coordinating agencies may have regional offices or field structures that provide a forum for information-sharing, consultation, and coordination of Federal agency regional awareness, prevention, preparedness, response, and recovery activities. These regional offices may also assist in providing technical assistance to State and local governments and evaluating radiological plans and exercises.

Regional Assistance Committees (RACs) in the DHS/FEMA regions serve as the primary coordinating structure at the Federal regional level. RAC membership mirrors that of the FRPCC, and RACs are chaired by a DHS/FEMA regional representative. Additionally, State emergency management agencies send representatives to RAC meetings and participate in regional exercise and training activities. The RACs provide a forum for information-sharing, consultation, and coordination of Federal regional awareness, prevention, preparedness, response, and recovery activities. The RACs also assist in providing technical assistance to State and local governments and evaluating radiological plans and exercises.

RESPONSIBILITIES

General

DHS is responsible for overall coordination of the Federal Government response to terrorist attacks, major disasters, and other emergencies defined in Homeland Security Presidential Directive (HSPD) 5. When exercising this role, DHS is supported by other coordinating agencies and cooperating agencies. For incidents of lesser severity, however, the coordinating agencies

may be responsible for overall coordination of the Federal response. Incidents will be managed at the lowest possible level; as incidents change in size, scope, and complexity, the response will adapt to meet requirements, as described in the *NRF*.

- For this annex, the coordinating agencies are those Federal agencies with specific nuclear/radiological authorities, technical expertise, and assets for responding to the unique characteristics of nuclear/radiological incidents. Coordinating agencies are listed in Table 1. The specific role of each coordinating agency will be determined by the scope of its particular authorities over relevant aspects of the incident, as described in more detail in this annex.

- Cooperating agencies include other Federal agencies that provide additional technical and resource support to DHS and the coordinating agencies.

In all cases, the Department of Justice (DOJ)/Federal Bureau of Investigation (FBI) manages and directs the law enforcement and domestic intelligence aspects of the response, while coordinating its activities with appropriate Federal, State, tribal, and local governments within the framework of this annex, and/or as provided for in established interagency agreements or plans. For these criminal investigations, the coordinating agencies and cooperating agencies perform the functions delineated in this annex and provide technical support and assistance to the DOJ/FBI in the performance of its law enforcement and criminal investigative mission. Further details regarding the DOJ/FBI response are outlined in the Terrorism Incident Law Enforcement and Investigation Annex.

Coordinating Agencies

For nuclear/radiological incidents, the coordinating agencies will be the Federal agencies that own, have custody of, authorize, regulate, or are otherwise assigned responsibility for the nuclear/radioactive material, facility, or activity involved in the incident. These Federal agencies are:

- The Department of Defense (DOD) or DOE, as appropriate, for incidents involving nuclear/radiological materials or facilities owned or operated by DOD or DOE.

- DOD and DOE, as appropriate, for incidents involving a nuclear weapon and/or classified components under the custody of the Federal agency.

- DOD, DOE, or the National Aeronautics and Space Administration (NASA), as appropriate, for special nuclear material under the custody of the Federal agency.

- The Nuclear Regulatory Commission (NRC), for incidents involving materials or facilities licensed by the NRC or Agreement States.

- DHS (through Customs and Border Protection) for incidents involving inadvertent import of radioactive materials.

- EPA or DHS/U.S. Coast Guard (USCG), as appropriate, for environmental response and cleanup for incidents not otherwise covered above.

By their very nature, RDDs and INDs do not have a Federal agency that owns/has custody of, authorizes, regulates, or is otherwise assigned responsibility for the material. However, as the agency with overall responsibility for domestic incident management, DHS will assume coordinating agency responsibilities with much support from various cooperating agencies.

Table 1 provides an overview of the coordinating agencies and the types of nuclear/radiological incidents in which they will be involved. The specific responsibilities of coordinating agencies are further described in Table 2.

Table 1: Coordinating Agencies for Nuclear/Radiological Incidents

NOTE: The coordinating agency will lead all or a portion or the Federal response, as specified by their particular authorities. They will support DHS when it is coordinating an overall multiagency Federal response to nuclear/radiological incidents.

Nuclear/Radiological Facilities or Materials Involved in Incident	Coordinating Agency
Nuclear facilities:	
(1) Owned or operated by DOD or DOE	(1) DOD or DOE
(2) Licensed by NRC or Agreement State	(2) NRC
(3) Not licensed, owned, or operated by a Federal agency or an Agreement State, or currently or formerly licensed facilities for which the owner/operator is not financially viable or is otherwise unable to respond	(3) EPA
Radioactive materials being transported:	
(1) Materials shipped by or for DOD or DOE	(1) DOD or DOE
(2) Shipment of NRC or Agreement State-licensed materials	(2) NRC
(3) Shipment of materials in certain areas of the coastal zone that are not licensed or owned by a Federal agency or Agreement State (see DHS/USCG list of responsibilities for further explanation of "certain areas")	(3) DHS/USCG
(4) All others	(4) EPA
Radioactive materials in space vehicles impacting within the United States:	
(1) Managed by NASA or DOD	(1) NASA or DOD
(2) Not managed by DOD or NASA impacting certain areas of the coastal zone	(2) DHS/USCG
(3) All others	(3) EPA
Foreign, unknown or unlicensed material:	
(1) Incidents involving inadvertent import of radioactive materials	(1) DHS
(2) Incidents involving foreign or unknown sources of radioactive material in certain areas of the coastal zone	(2) DHS/USCG
(3) All others not otherwise assigned to DHS/CBP or DHS/USCG	(3) EPA
Nuclear weapons	DOD or DOE (based on custody at time of incident)
Radiological dispersion device (RDD) or improvised nuclear device (IND)	DHS

Coordinating agencies provide the leadership, expertise, and authorities to implement critical and specific aspects of a Federal nuclear/incident response. Some of these are unique authorities, technical expertise, and assets for responding to nuclear/radiological incidents that are not otherwise described in the *NRF*.

The coordinating agencies may also take appropriate independent emergency actions within the limits of their own statutory authority to protect the public, mitigate immediate hazards, and gather information concerning the emergency to avoid delay. These authorities include the following:

- **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA):** CERCLA gives the Federal Government the authority to respond to releases or threatened releases of hazardous substances (including radionuclides) that may endanger public health or the environment. CERCLA also gives the Federal Government the authority to compel responsible parties to respond to releases of hazardous substances. The definition of "release" under CERCLA excludes releases of source, byproduct, or special nuclear material from a nuclear incident at certain facilities licensed by the NRC—most notably, commercial nuclear power plants and fuels associated with these plants.

- **National Oil and Hazardous Substances Contingency Plan (NCP):** CERCLA is implemented through the NCP, a regulation found in 40 CFR Part 300. At the on-scene level, this response authority is implemented by Federal On-Scene Coordinators (OSCs). OSCs may assist State and local governments in responding to releases, but also have the authority to direct the response when needed to ensure protection of public health and the environment. Typical response actions include: air monitoring; assessment of the extent of the contamination; stabilization of the release; decontamination; and waste treatment, storage, and disposal. Four Federal agencies have OSC authority for hazardous substance emergencies: EPA, DHS/USCG, DOD, and DOE.

- **Atomic Energy Act (AEA) of 1954 (as amended):** Under the AEA, DOE will be responsible for managing the Federal response to a nuclear/radiological release at a DOE facility or involving DOE materials. DOD will manage the on-site response for incidents involving a DOD facility and the overall response for nuclear weapons or other radioactive material in DOD custody. For incidents involving NRC or Agreement State-regulated facilities, activities, or material, the NRC is responsible for performing an independent assessment of the safety of the facility or material; evaluating licensee protective action recommendations; performing oversight of the licensee (monitoring, advising, assisting, and/or directing); and reporting information, as appropriate, to media and public entities. The AEA also charges EPA with additional responsibilities regarding radiation matters that directly or indirectly affect public health.

- **National Security Act:** The National Security Act of 1947 created the Department of Defense, headed by a Secretary of Defense. Title 50, U.S.C. Sec. 797 makes it a crime to willfully violate a regulation or order promulgated by the Secretary of Defense or his representative, for the protection or security of military equipment or other property or places subject to the jurisdiction, administration, or custody of DOD. This statute is executed within the Department by DOD Directive (DODD) 5200.8, Security of DOD Installations and Resources. DODD 5200.8 is the natural, legal extension of statutory authority found in 50 U.S.C. Sec. 797.

- **Immediate Response Authority:** Although not rooted in statutory law, DOD doctrine allows commanders to provide resources and assistance to civil authorities when a disaster overwhelms the capabilities of local authorities and necessitates immediate action to prevent human suffering, save lives, or mitigate great property damage. Immediate

response actions can include the types of activities authorized under the Stafford Act, including, at the request of civil authorities, rescue, evacuation, and emergency medical treatment, restoration of essential public services, debris removal, controlling contaminated areas, safeguarding and distributing food and essential supplies, and supplying interim emergency communications. The immediate response authority may also include law enforcement activities ordinarily prohibited by the Posse Comitatus Act. The controlling DOD directive does not require a request from State or local officials, but states that DOD Components shall not perform any function of civil government unless absolutely necessary on a temporary basis under conditions of Immediate Response.

- **Public Health Service Act (PHSA):** The PHSA directs EPA to support State and local authorities in their preparedness and response activities regarding public health emergencies. This support may include providing training, technical advice, and direct assistance.

Table 2 below presents the specific responsibilities of each coordinating agency, as specified by statutory authorities or other mandating doctrine.

Table 2. Coordinating Agency-Specific Key Responsibilities for a Nuclear/Radiological Incident

Agency	Responsibilities
Department of Defense	As indicated in Table 1, DOD is the coordinating agency for Federal actions for radiological incidents involving DOD facilities, including U.S. nuclear-powered ships, or material otherwise under their jurisdiction (e.g., transportation of material shipped by or for DOD). Under CERCLA and the NCP, DOD is responsible for hazardous substance emergencies involving DOD facilities, vessels, and materials, including transportation-related incidents. DOD provides a Federal OSC responsible for taking all CERCLA response actions, which includes on-site and off-site response actions (40 CFR 120(c)). For incidents at nuclear/radiological facilities that it owns or operates, or incidents involving transportation of DOD nuclear/radiological materials, DOD is responsible for: • Mitigating the consequences of an incident. • Providing notification and appropriate protective action recommendations to State, tribal, and/or local government officials. • Minimizing the radiological hazard to the public. For radiological incidents involving a nuclear weapon, special nuclear material, and/or classified components that are in DOD custody, DOD may establish a National Defense Area (NDA). • DOD will coordinate with State and local officials to ensure appropriate public health and safety actions are taken outside the NDA. • DOD will lead the overall response to safeguard national security information and/or restricted data, or equipment and material. • DOD may also place lands normally not under DOD control under their temporary control for the duration of the incident. DOD coordinates the Federal response for incidents involving the release of nuclear/radioactive materials from DOD space vehicles or joint space vehicles with significant DOD involvement. A joint venture is an activity in which the U.S. Government has provided extensive design/financial input; has provided and maintains ownership of instruments, spacecraft, or the launch vehicle; or is intimately involved in mission operations. A joint venture is not created by simply selling or supplying material to a foreign country for use in its spacecraft.

Agency	Responsibilities
Department of Energy	As indicated in Table 1, DOE is the coordinating agency for the Federal response to a nuclear/radiological release at a DOE facility or involving DOE materials (e.g., during the use, storage, and shipment of a variety of radioactive materials; the shipment of spent reactor fuel; the production, assembly, and shipment of nuclear weapons and special nuclear materials; the production and shipment of radioactive sources for space ventures; and the storage and shipment of radioactive and mixed waste). Under CERCLA and the NCP, DOE is responsible for hazardous substance emergencies involving DOE facilities, vessels, and materials, including transportation-related incidents. DOE provides a Federal OSC responsible for taking all CERCLA response actions, which includes on-site and off-site response actions (40 CFR 120(c)). For incidents at nuclear/radiological facilities that it owns or operates, or incidents involving transportation of DOE nuclear/radiological materials, DOE is responsible for: • Mitigating the consequences of an incident. • Providing notification and appropriate protective action recommendations to State, tribal, and/or local government officials. • Minimizing the radiological hazard to the public. For radiological incidents involving a nuclear weapon, special nuclear material, and/or classified components that are in DOE custody, DOE may establish a National Security Area (NSA) and will coordinate with State and local officials to ensure appropriate public health and safety actions are taken outside the NDA or NSA. DOE Accident Response Group (ARG) teams will deploy to mitigate the consequences of a nuclear weapon accident in conjunction with specialized assets from DOD regardless of whether DOE or DOD has custody of the weapon or special nuclear material. DOE coordinates Federal offsite radiological environmental monitoring and assessment activities as lead technical organization in FRMAC (emergency phase), and the provider of regional Radiation Assistance Program (RAP) teams, the Aerial Measuring System (AMS), and the Radiation Emergency Assistance Center/Training Site (REAC/TS), regardless of who is designated the coordinating agency. DOE provides atmospheric modeling predictions from the DOE National Atmospheric Release Advisory Capability (NARAC) to the Interagency Modeling and Atmospheric Assessment Capability (IMAAC). DOE works closely with the Senior EPA representative to facilitate a smooth transition of the Federal radiological monitoring and assessment coordination responsibility to EPA at a mutually agreeable time and after consultation with the States and coordinating agency.

Agency	Responsibilities
Department of Homeland Security (DHS)	Under HSPD-5, DHS is the principal Federal agency for domestic incident management and coordinates the Federal Government's resources for responding to terrorist attacks, major disasters, or other emergencies. For purposes of leading activities under this annex, the Secretary of Homeland Security is responsible for coordinating the overall Federal response to RDD/INDs, while the DOJ/FBI is responsible for actions which are further described in the Terrorism Incident Law Enforcement and Investigation Annex. Cooperating agencies will provide support as appropriate. As determined by the Secretary of Homeland Security, the Catastrophic Incident Annex and the Catastrophic Incident Supplement may also be implemented. Under the Homeland Security Act, DHS has control of the NIRT. DHS/CBP coordinates the Federal response for incidents involving the inadvertent import of radioactive material. For incidents at the border, DHS/CBP maintains radiation detection equipment and nonintrusive inspection technology at ports of entry and Border Patrol checkpoints to detect the presence of radiological substances transported by persons, cargo, mail, or conveyance arriving from foreign countries.
DHS/U.S. Coast Guard (USCG)	As indicated in Table 1, DHS/USCG is the coordinating agency for the Federal response for incidents involving the release of nuclear/radioactive materials that occur in certain areas of the coastal zone (as defined by the NCP), including: • Release from transportation incidents involving the release of nuclear/radioactive materials that are not licensed or owned by a Federal agency or Agreement State. • Incidents involving space vehicles not managed by DOD or NASA impacting certain areas of the coastal zone. • Incidents involving foreign or unknown sources of radioactive material. EPA coordinates responses in areas of the coastal zone other than those defined above as certain areas of the coastal zone. For incidents that have cross-boundary impacts, DHS/USCG works with the other affected agency to determine how best to cooperatively respond consistent with the NCP model. DHS/USCG coordinates response for these incidents only during the prevention and emergency response phase, and transfers responsibility for later response phases to the appropriate agency, consistent with the NCP.

Agency	Responsibilities
Environmental Protection Agency (EPA)	As indicated in Table 1, EPA is the coordinating agency for the Federal environmental response for incidents that occur at facilities not licensed, owned, or operated by a Federal agency or an Agreement State, or currently or formerly licensed facilities for which the owner/operator is not financially viable or is otherwise unable to respond. EPA is also the coordinating agency for the Federal environmental response for incidents involving the release of nuclear/radioactive materials that occur in the inland zone and in areas of the coastal zone not addressed by DHS/USCG, including: • Transportation incidents involving the release of nuclear/radioactive materials that are not licensed or owned by a Federal agency or Agreement State. • Incidents involving space vehicles not managed by DOD or NASA or addressed by DHS/USCG. • Incidents involving foreign, unknown, or unlicensed radiological sources that have actual, potential, or perceived radiological consequences in the United States or its territories, possessions, or territorial waters, and that are not addressed by DHS/CBP, DHS/USCG, or the DHS Domestic Nuclear Detection Office (DNDO). When acting as the coordinating agency, EPA coordinates the Federal environmental response. For a DHS-led Federal response, EPA will generally be providing that response coordination support to DHS through ESF #10 – Oil and Hazardous Materials Response. For an EPA-led Federal response, EPA will generally be responding under the NCP (which is an operational supplement to the *NRF*). For some incidents, EPA may also be relying upon its Public Health Service Act authorities.
National Aeronautics and Space Administration (NASA)	As indicated in Table 1, NASA is the coordinating agency for the Federal response for incidents involving the release of nuclear/radioactive materials from NASA space vehicles or joint space vehicles with significant NASA involvement. For radiological incidents involving a nuclear weapon, special nuclear material, and/or classified components that are in NASA custody, NASA may establish a National Defense Area (NDA), and will coordinate with State and local officials to ensure appropriate public health and safety actions are taken outside the NDA.

Agency	Responsibilities
Nuclear Regulatory Commission (NRC)	As indicated in Table 1, the NRC is the coordinating agency for incidents at or caused by a facility or an activity that is licensed by the NRC or an Agreement State. These facilities include but are not limited to, commercial nuclear power plants, fuel cycle facilities, DOE-owned gaseous diffusion facilities operating under NRC regulatory oversight, independent spent fuel storage installations, radiopharmaceutical manufacturers, and research reactors. The NRC licensee primarily is responsible for taking action to mitigate the consequences of an incident and providing appropriate protective action recommendations to State, tribal, and/or local government officials. The NRC: • Performs an independent assessment of the incident and potential offsite consequences and, as appropriate, provides recommendations concerning any protective measures. • Performs oversight of the licensee, to include monitoring, evaluation of protective action recommendations, advice, assistance, and, as appropriate, direction. • Dispatches, if appropriate, an NRC site team of technical experts to the licensee's facility. • Under certain situations involving the protection of public health/safety or national security, may take possession of special nuclear materials and/or operate certain facilities regulated by the NRC. • Closely coordinates its actions with State and local government officials during an incident by providing advice, guidance, and support as needed.

OTHER KEY FEDERAL RADIOLOGICAL RESOURCES/ASSETS

In carrying out their responsibilities, DHS and the coordinating agencies may request specialized assets for nuclear/radiological response. Some of the assets are provided by individual cooperating agencies (through ESF activations or their own authorities) while others may be interagency.

Key specialized Federal nuclear/radiological assets/teams are highlighted below, while additional agency-specific support is described in "Incident Actions" section below.

- **Nuclear Incident Response Team (NIRT):** Under the Homeland Security Act, DHS has authority to activate the NIRT. When activated, DHS has control of the NIRT, which consists of (1) DOE entities that perform nuclear and/or radiological emergency support and assistance functions, and (2) EPA entities that perform such support functions (including radiological emergency response functions) and related functions. The Federal Radiological Monitoring and Assessment Center is a NIRT asset maintained by DOE that is available on request to respond to nuclear/radiological incidents. The purpose of the FRMAC is to provide a clear operating picture of radiological conditions in the field to responders for decisionmaking and incident action planning; it provides radiation measurements, interpretations of radiation distributions, and overall characterization of the radiological conditions (protective action recommendations are provided by the A-Team, as discussed below). The FRMAC is established at or near the incident location in coordination with DHS, the coordinating agency, other Federal agencies, and State, tribal, and local authorities. A

FRMAC normally includes representation from DOE, EPA, the Department of Commerce, the National Communications System (DHS/NPPD/NCS), DOD/U.S. Army Corps of Engineers (USACE), and other Federal agencies as needed. Regardless of who is designated as the coordinating agency, when the FRMAC is activated, DOE, through the FRMAC or DOE Consequence Management Home Team (CMHT) or the Consequence Management Response Team (CMRT), coordinates all Federal environmental and agricultural radiological monitoring and assessment activities for the initial phases of the response. When the FRMAC is transferred to EPA, it assumes responsibility for coordination of radiological monitoring and assessment activities.

- **Advisory Team for Environment, Food, and Health (A-Team):** The Advisory Team includes representatives from DHS, EPA, the Department of Agriculture, the Food and Drug Administration, the Centers for Disease Control and Prevention, and other Federal agencies. The Advisory Team develops coordinated advice and recommendations for Incident Command/Unified Command, DHS, the Unified Coordination Group, the coordinating agency, and State, tribal, and local governments concerning environmental, food health, and animal health matters. The Advisory Team provides Federal advice in matters related to the following:
  - Environmental assessments (field monitoring) required for developing recommendations with advice from State, tribal, and local governments and/or the FRMAC.
  - Protective Action Guides and their application to the emergency.
  - Protective Action Recommendations using data and assessment from the FRMAC.
  - Protective actions to prevent or minimize contamination of milk, food, and water, and to prevent or minimize exposure through ingestion.
  - Recommendations for minimizing losses of agricultural resources from radiation effects.
  - Availability of food, animal feed, and water supply inspection programs to assure wholesomeness.
  - Relocation, reentry, and other radiation protection measures prior to recovery.
  - Recommendations for recovery, return, and cleanup issues.
  - Health and safety advice or information for the public and for workers.
  - Estimated effects of radioactive releases on human health and the environment.
  - Other matters, as requested by the coordinating agency.
- **DOE Radiological Assistance Program (RAP) Team:** RAP teams are located at DOE operations offices, national laboratories, and some area offices. They can be dispatched to a radiological incident by the DOE regional coordinating offices responding to a radiological incident.
- **The Interagency Modeling and Atmospheric Assessment Center (IMAAC):** The IMAAC is an interagency center responsible for production, coordination, and dissemination of consequence predictions for an airborne hazardous material release.
- **Interagency Consortium of Laboratory Networks (ICLN):** The ICLN is a coordinated and operational system of all-hazards laboratory networks that provide timely, high-quality, and interpretable results for early detection and effective consequence management of acts of terrorism and other events requiring an integrated laboratory response. The ICLN comprises major laboratory networks as well as the Federal systems specifically responsible for laboratory preparedness and response. Access to the appropriate network is conducted through the network lead.

CONCEPT OF OPERATIONS

This concept of operations is applicable to potential and actual radiological/nuclear incidents requiring Federal coordination as delineated in this annex.

General

The owner/operator of a nuclear/radiological facility (DOE, DOD, or NRC licensee) primarily is responsible for mitigating the consequences of an incident, providing notification and appropriate protective action recommendations to State, tribal, and/or local government officials, and minimizing the radiological hazard to the public.

The owner/operator has primary responsibility for actions within the facility boundary and may also have responsibilities for response and recovery activities outside the facility boundary under applicable legal obligations (e.g., contractual; licensee; CERCLA).

State, tribal, and local governments primarily have primary responsibility for protecting life, property, and the environment in those areas outside the facility boundary or incident location. This does not, however, relieve nuclear/radiological facility or material owners/operators from any applicable legal obligations.

State, tribal, and local governments and owners/operators of nuclear/radiological facilities or activities should request assistance through established regulatory communication and response protocols. However, they may request assistance directly from DHS, other Federal agencies, and/or State governments with which they have preexisting arrangements or relationships providing that agency with regulatory authority is also notified.

Notification

The owner/operator of a nuclear/radiological facility or owner/transporter of nuclear/radiological material is generally the first to become aware of an incident and notifies State, tribal, and local authorities and the coordinating agency.

Federal, State, tribal, and local governments that become aware of a radiological incident from any source other than the coordinating agency notify that agency and the DHS National Operations Center.

The coordinating agency provides notification of a radiological incident to the NOC and other Federal agencies, as appropriate.

Releases of reportable quantities or any listed hazardous materials as described within 40 CFR Part 302 are reported to the National Response Center.

Activation

As set forth in the *NRF*, coordinating agencies (and cooperating agencies where appropriate) will provide representatives, as appropriate, to the *NRF* elements activated, including the:

- Domestic Readiness Group (DRG).
- National Operations Center (NOC), to report information and intelligence relative to situational awareness and incident management to the NOC.
- National Response Coordination Center (NRCC), to provide interagency coordination and Federal resource tracking, if needed.

- Incident Management Planning Team (IMPT).
- Unified Coordination Group.
- Unified Incident Command/Unified Area Command. The coordinating agency will be represented in an appropriate position in the Unified Command structure (as defined by the NIMS), and coordinates Federal radiological response activities at appropriate field facilities.[1]

The coordinating agency may establish a field facility; assist State, tribal, and local response organizations; monitor and support owner/operator activities (when there is an owner or operator); provide technical support to the owner/operator, if requested; and serve as a primary Federal source of information about incident conditions.

For regional incidents, the coordinating agency provides representation to the Joint Field Office (JFO) to serve as a senior Federal official within the Unified Coordination Group when a JFO is activated. Cooperating agencies may also be represented, as needed.

NIMS/ICS Implementation

HSPD-5, "Management of Domestic Incidents," requires that Federal preparedness assistance funding for States, territories, local jurisdictions, and tribal entities be dependent on NIMS compliance; it is expected that all jurisdictions will respond to a nuclear/radiological incident in a manner consistent with the principles of NIMS and the Incident Command System (ICS).

Large-scale nuclear and radiological emergencies may present particular challenges for the traditional ICS structure, requiring extraordinary coordination between Federal, State, tribal, and local governments and private-sector and nongovernmental organizations. Whether it is a single agency/jurisdiction response or a more complex incident with national implications requiring a multiagency/multijurisdictional response, ICS provides a flexible core mechanism for coordinated and collaborated incident management.

The initial response to domestic incidents is typically handled at the local level. In accordance with NIMS, local responders are responsible for implementing ICS to manage the incident response. Federal agencies will integrate into the Incident Command in support of the local jurisdictions.

Most incidents under this annex will be multiagency/multijurisdictional responses, and the ICS Command function will be managed by a Unified Command.

The coordinating agency is expected to participate in the Unified Command at the highest level (i.e., at the Area Command level if established). Other agencies may also participate in the Unified Command when consistent with ICS principles.

The primary function of the FRMAC is to provide information for planning incident response operations; planning for FRMAC activities is expected to incorporate into Unified Command in the Planning Section consistent with ICS principles. FRMAC personnel will work within the ICS to develop the Monitoring and Sampling Plan and ensure that it is reflected in and consistent with the Incident Action Plan. The FRMAC structure will remain flexible and will be tailored to specific incident requirements.

[1] Appropriate field facilities may include an Incident/Area Command Post, Emergency Operations Center, Emergency Operations Facility, Emergency Control Center, etc.

During the initial phases of the incident, when is DOE is responsible for the FRMAC, it will be established organizationally as a discrete unit within the Incident Command structure to coordinate all radiological monitoring and assessment activities in support of State, tribal, and local authorities, the Federal coordinating agency, and DHS. The FRMAC Director will normally serve as a Deputy Planning Section Chief overseeing all of the FRMAC.

The Advisory Team will integrate into the Planning Section to provide technical expertise to the Unified Command and the coordinating agency.

RESPONSE ACTIVITIES

Table 3 presents the specific capabilities and responsibilities carried out by coordinating agencies and cooperating agencies to support State, tribal, and local activities during the response.

Table 3: Nuclear/Radiological Incident Response Activities

Response Activity	Federal Agency Capabilities/Responsibilities
Incident Security	• DOD, DOE, or NASA may establish NDAs or NSAs for special nuclear materials under their control, to safeguard classified information and/or restricted data, or equipment and material, and place non-Federal lands under Federal control for the duration of the incident. DOD, DOE, or NASA, as appropriate, coordinates security in and around these locations, as necessary. • For incidents at other Federal or private facilities, the owner/operator provides security within the facility boundaries. If a release of radioactive material occurs beyond the facility boundaries, State, tribal, or local governments provide security for the release area. • State, tribal, and local governments provide security for radiological incidents occurring on public lands (e.g., a transportation incident) other than within NDAs or NSAs. • ESF #13 – Public Safety and Security may be activated to provide additional security resources and capabilities (e.g., for an RDD/IND).
General Technical Operations	• The DRG determines whether the severity of an incident warrants a request for NIRT assets. • DOE learns of an emergency when it is alerted to a possible problem or receive a request for radiological assistance. DOE maintains national and regional coordination offices as points of access to Federal radiological emergency assistance. Requests for RAP teams are generally directed to the appropriate DOE Regional Coordinating Office. All other requests for Federal radiological monitoring and assessment go directly to DOE's Emergency Operations Center (EOC) in Washington, DC. When other agencies receive requests for Federal radiological monitoring and assessment assistance, they notify the DOE EOC.

Response Activity	Federal Agency Capabilities/Responsibilities
General Technical Operations (Continued)	• DOE may respond to a State or coordinating agency request for assistance by dispatching a RAP team. If the situation requires more assistance than a RAP team can provide, DOE alerts or activates additional resources. These resources can include the establishment of a FRMAC as the coordination center for Federal radiological assessment activities. DOE may respond with additional resources including the Aerial Measurement System (AMS) to provide wide-area radiation monitoring, Radiation Emergency Assistance Center/Training Site (REAC/TS) medical advisory teams, National Atmospheric Release Advisory Center (NARAC) support, or if the accident involves a U.S. nuclear weapon, the Accident Response Group (ARG). State agencies are encouraged to collocate their radiological monitoring and assessment activities. Some participating Federal agencies have radiological planning and emergency responsibilities as part of their statutory authority, as well as established working relationships with State counterpart agencies. The monitoring and assessment activity coordinated by the FRMAC does not alter these responsibilities but complements them by providing for coordination of the Federal radiological monitoring and assessment response activities.
Environmental Plume Modeling	• When DHS coordinates the overall Federal response, the IMAAC generates the single and interagency coordinated Federal prediction of atmospheric dispersions and their consequences. The IMAAC may also generate predictions for other incidents requiring Federal coordination. • The coordinating agency is responsible for ensuring the sharing of all outputs from the IMAAC with all appropriate response organizations.
Environmental Monitoring	• The FRMAC coordinates Federal monitoring and assessment activities with State, tribal, and local governments when requested. If the FRMAC is not stood up, the coordinating agency assumes responsibility for coordinating the Federal monitoring and assessment activities with State, tribal, and local governments. • Federal first responders may provide radiological monitoring and assessment data directly to State, tribal, and local governments as requested in support of protective action decisionmaking. If a FRMAC is established, DOE will provide a mechanism for transmitting data to and from the FRMAC within NIMS/ICS protocols. Prior to the initiation of FRMAC operations, Federal first responders coordinate radiological monitoring and assessment data with the DOE Consequence Management Home Team (CMHT) or the Consequence Management Response Team (CMRT). • When a FRMAC is established, responsibility for coordinating radiological monitoring and assessment activities will transition to EPA at a mutually agreeable time, and after consultation with State, tribal, and local governments, the coordinating agency, and the Unified Coordination Group. • The coordinating agency is responsible for ensuring the sharing of all outputs from the FRMAC with all appropriate response organizations.
Emergency Worker Monitoring	• Each response agency has the responsibility to monitor the safety of its own workers. OSHA provides support and regulatory oversight, as necessary.

Response Activity	Federal Agency Capabilities/Responsibilities
Development and Dissemination of PARs	• Data in support of health and safety will be shared among response agencies prior to development of formal Protective Action Recommendations (PARs). • Federal PARs are developed by the coordinating agency and the Advisory Team, as appropriate. • Federal PARs may include advice and assistance on measures to avoid or reduce exposure of the public to radiation from a release of radioactive material. This includes advice on emergency actions such as sheltering, evacuation, and prophylactic use of potassium iodide and administration of other pharmaceutical countermeasures. It also includes advice on long-term measures, such as restriction of food, temporary relocation, or permanent resettlement, to avoid or minimize exposure to residual radiation or exposure through the ingestion pathway. • All Federal PARs are coordinated through the Incident Command or Unified Command/Area Command (which will include the coordinating agency) consistent with the NIMS process. The coordinating agency is responsible for ensuring the sharing of all outputs from the Advisory Team with appropriate response organizations. • State, tribal, and local governments are responsible for implementing protective actions as they deem appropriate.
Population Monitoring	• The Department of Health and Human Services (HHS), through ESF #8 – Public Health and Medical Services and in consultation with the coordinating agency, coordinates Federal support for external monitoring of people • HHS assists local and State health departments in establishing a registry of potentially exposed individuals, performs dose reconstruction, and conducts long-term monitoring of this population for potential long-term health effects.
Laboratory Analysis	• The Interagency Consortium of Laboratory Networks (ICLN) and National Labs coordinate planning for laboratory analyses for nuclear/radiological events. • Under the ICLN, different Federal agencies have been designated the lead for different types of analyses: (1) the Food and Drug Administration (HHS) for food and agriculture; (2) the Centers for Disease Control and Prevention (HHS) for bioassays; and (3) EPA and DOE for environmental samples.
Environmental Monitoring and Sampling for Characterization and Reentry	• This operation will be carried out by the FRMAC when activated. When the FRMAC is not activated, support may be provided by an ESF #10 activation. • DOE initially has the FRMAC lead, but the FRMAC lead will transition to EPA for recovery/remediation. • When requested, DOE and other Federal agencies may provide radiation safety support for reentry to critical infrastructure and for other critical activities.
Environmental Monitoring and Sampling for Cleanup Verification	• EPA provides support under ESF #10 except for incidents where DOD or DOE provides the OSC. In such cases, DOE or DOE is primarily responsible for this activity, both on-site and off-site. CERCLA funds also may not be available to support response to nuclear incidents at certain facilities licensed by the NRC.
Release of Public Information	• DHS/ESF #15 – External Affairs will release public information regarding the incident. • For incidents involving terrorism, any participating Federal agency may raise issues regarding the sharing of sensitive information for responder and public safety that cannot be resolved at the incident command level to the Unified Coordination Group for resolution.

Response Activity	Federal Agency Capabilities/Responsibilities
Population Decontamination	• Decontamination of possibly affected victims is accomplished locally and is the responsibility of State, tribal, and local governments. • Federal resources are provided at the request of, and in support of, the affected State(s). HHS, through ESF #8 and in consultation with the coordinating agency, coordinates Federal support for population decontamination. • HHS assists and supports State, tribal, and local governments in performing monitoring for internal contamination and administering available pharmaceuticals for internal decontamination, as deemed necessary by State health officials. • USDA provides support for animal decontamination under ESF #11 –Agriculture and Natural Resources.
Emergency Worker Decontamination	• The FRMAC provides support for decontamination of Federal, State, and local emergency responders integrating into the FRMAC. • Agencies are responsible for decontamination of their own workers not integrated in the FRMAC.
Response Equipment Decontamination	• The FRMAC provides support for decontamination of Federal, State, and local equipment integrating into the FRMAC. • Agencies are responsible for decontamination of their own equipment that is not integrated in the FRMAC.
Mortuary Affairs	• Support primarily provided by HHS under ESF #8.
Contaminated Animal Management	• USDA provides support for assessment and decontamination of contaminated animals, including companion animals, livestock, poultry, and wildlife. • USDA provides support for stabilization and disposition of contaminated animal carcasses, with additional support from ESF #3 – Public Works and Engineering and ESF #10.
Contaminated Agricultural Product Management	• USDA provides support under ESF #11, with additional support from ESF #3 and ESF #10, for the assessment, stabilization, and disposal of contaminated plant materials including food, feed, fiber, and crops.
Radioactive Waste Storage and Disposal	• EPA provides support under ESF #10 except for incidents where DOD or DOE provides the OSC. In such cases, DOE or DOE is primarily responsible for this activity, both on-site and off-site. CERCLA funds also may not be available to support response to nuclear incidents at certain facilities licensed by the NRC. • Support provided by DOD/USACE and other Federal agencies, as needed for RDD/IND.
Contaminated Debris Removal	• DOD/USACE provides support under ESF #3.
Environmental Remediation	• EPA provides support under ESF #10 except for incidents where DOD or DOE provides the OSC. In such cases, DOE or DOE is primarily responsible for this activity, both onsite and offsite. CERCLA funds also may not be available to support response to nuclear incidents at certain facilities licensed by the NRC. • Support provided by USACE and other Federal agencies, as needed for RDD/IND.

RECOVERY

For an incident requiring a coordinated Federal response, DHS coordinates overall Federal recovery activities, while the coordinating agency maintains responsibility for managing the Federal technical radiological cleanup activities in accordance with **its statutory authorities, responsibilities, and *NRF* mechanisms**.

For all **other** radiological incidents, the coordinating agency coordinates environmental remediation/cleanup in concert with cognizant State, tribal, and local governments, and owners/operators, as applicable. While retaining technical lead for these activities, the coordinating agency may **request** support from a cooperating agency that has cleanup/recovery experience and capabilities (e.g., EPA, USACE).

State, tribal, and local governments primarily are responsible for planning the recovery of the affected area (the term "recovery," as used here, encompasses any action dedicated to the continued protection of the public and resumption of normal activities in the affected area). Recovery planning is initiated at the request of the State, tribal, or local governments, and generally does not take place until the initiating conditions of the incident have stabilized and immediate actions to protect public health, safety, and property are accomplished. Upon request, the Federal Government assists State, tribal, and local governments to develop and execute recovery plans.

Private owners/operators have primary responsibility for recovery planning activities and eventual cleanup within their facility boundaries and may have responsibilities for recovery activities outside their facility under applicable legal obligations (e.g., contractual, licensee, CERCLA).

The DOE FRMAC Director works closely with the FRMAC's Senior EPA representative to facilitate a smooth transition of the Federal radiological monitoring and assessment coordination responsibility to EPA at a mutually agreeable time, and after consultation with DHS, the Unified Coordination Group, and State, tribal, and local governments. The following conditions are intended to be met prior to transfer:

- The immediate emergency condition is stabilized;
- Offsite releases of radioactive material have ceased, and there is little or no potential for further unintentional offsite releases;
- The offsite radiological conditions are characterized and the immediate consequences are assessed;
- An initial long-range monitoring plan has been developed in conjunction with the affected State, tribal, and local governments and appropriate Federal agencies; and
- EPA has received adequate assurances from the other Federal agencies that they are committing the required resources, personnel, and funds for the duration of the Federal response.

Radiological monitoring and assessment activities are normally terminated when the coordinating agency, in consultation with other participating agencies and State, tribal, and local governments, determines that:

- There is no longer a threat to public health and safety or the environment;
- State, tribal, and local resources are adequate for the situation; and
- There is mutual agreement among the agencies involved to terminate monitoring and assessment.

ADDITIONAL RESPONSIBILITIES

In addition to leading specific portions of a response, coordinating agencies, along with other Federal agencies, may bring specific expertise pertinent to nuclear/radiological incidents. Table 4 below identifies the specific support that these agencies may provide.

Table 4: Additional Federal Agency Capabilities for a Nuclear/Radiological Incident

Agency	Additional Responsibilities
Department of Agriculture (USDA)	(See the ESF #11 – Agriculture and Natural Resources Annex for additional information.) • Collects agricultural samples within the Ingestion Exposure Pathway Emergency Planning Zone (through the FRMAC). Assists in the evaluation and assessment of data to determine the impact of the incident on agriculture. • Assesses damage to crops, soil, livestock, poultry, and processing facilities and incorporates findings in a damage assessment report. • Supports/advises on decontamination and screening of pets and farm animals that may be exposed to radioactive material.
Department of Commerce (DOC)	• Provides operational weather observations and prepares forecasts tailored to support emergency incident management activities. • Provides plume dispersion assessment and forecasts to the IMAAC and/or coordinating agency, in accordance with established procedures. • Archives, as a special collection, the meteorological data from national observing and numerical weather analysis and prediction systems applicable to the monitoring and assessment of the response. • Ensures that marine fishery products available to the public are not contaminated. • Provides assistance and reference material for calibrating radiological instruments. • Provides radiation shielding materials. • In the event of materials potentially crossing international boundaries, serves as the agent for informing international hydrometeorological services and associated agencies through the mechanisms afforded by the World Meteorological Organization. • Provides radioanalytical measurement support and instrumentation.

Agency	Additional Responsibilities
Department of Defense (DOD)	• Provides Defense Support of Civil Authorities (DSCA) in response to requests for assistance during domestic incidents. With the exception for support provided under Immediate Response Authority, the obligation of DOD resources to support requests for assistance is subject to the approval of the Secretary of Defense. Details regarding DSCA are provided in the *NRF*. • Provides Immediate Response Authority under imminently serious conditions resulting from any civil emergency that may require immediate action to save lives, prevent human suffering, or mitigate great property damage. When such conditions exist and time does not permit prior approval from higher headquarters, local military commanders and responsible officials from DOD components and agencies are authorized by DOD directive, subject to any supplemental direction that may be provided by their DOD component, to take necessary action to respond to requests of civil authorities. All such necessary action is referred to as "Immediate Response."

Department of Defense/U.S. Army Corps of Engineers (USACE)	(See the ESF #3 Annex for additional information.)
	• For RDD/IND incidents, provides response and cleanup support as a cooperating agency.
	• Integrates and coordinates with other agencies, as requested, to perform any or all of the following:
	  • Radiological survey functions
	  • Gross decontamination
	  • Site characterization
	  • Contaminated water management
	  • Site remediation.

Department of Energy (DOE)	• Develops and maintains FRMAC policies and procedures, determines FRMAC composition, and maintains FRMAC operational readiness. • Coordinates Federal offsite radiological environmental monitoring and assessment activities as lead technical organization in FRMAC (emergency phase), regardless of who is designated the coordinating agency. • Maintains technical liaison with State and local agencies with monitoring and assessment responsibilities. • Maintains a common set of all offsite radiological monitoring data in an accountable, secure, and retrievable form and ensures the technical integrity of FRMAC data. • Provides monitoring data and interpretations, including exposure rate contours, dose projections, and any other requested radiological assessments, to the coordinating agency and to the States. • Provides, in cooperation with other Federal agencies, the personnel and equipment to perform radiological monitoring and assessment activities, and provides on-scene analytical capability supporting assessments. • Requests supplemental assistance and technical support from other Federal agencies as needed. • Arranges consultation and support services through appropriate Federal agencies to all other entities (e.g., private contractors) with radiological monitoring functions and capabilities and technical and medical expertise for handling radiological contamination and population monitoring.

Agency	Additional Responsibilities
DOE (Continued)	• Works closely with the Senior EPA representative to facilitate a smooth transition of the Federal radiological monitoring and assessment coordination responsibility to EPA at a mutually agreeable time and after consultation with the States and coordinating agency. • Provides, in cooperation with other Federal and State agencies, personnel and equipment, including portal monitors, to support initial external screening and provides advice and assistance to State and local personnel conducting screening/decontamination of persons leaving a contaminated zone. • Provides plume trajectories and deposition projections for emergency response planning assessments including source term estimates where limited or no information is available, including INDs and RDDs, to the IMAAC and/or coordinating agency, in accordance with established procedures. • Upgrades, maintains, coordinates, and publishes documentation needed for the administration, implementation, operation, and standardization of the FRMAC. • Maintains and improves the ability to provide wide-area radiation monitoring now resident in the AMS. • Maintains and improves the ability to provide medical assistance, advisory teams, and training related to nuclear/radiological accidents and incidents now resident in the REAC/TS. • Maintains and improves the ability to provide correct modeled results through integration of actual radiation measurements obtained from both airborne and ground sources, resident in the NARAC. The NARAC also maintains and improves their ability to model the direct results (blast, thermal, radiation, EMP) of a nuclear detonation. • Maintains and improves the first-response ability to assess an emergency situation and to advise decisionmakers on what further steps can be taken to evaluate and minimize the hazards of a radiological emergency resident in the RAP. • Maintains and improves the ability to respond to an emergency involving U.S. nuclear weapons resident in the ARG. • Maintains and improves the ability of the Consequence Management Planning Team, CMHT, and CMRTs to provide initial planning, coordination, and data collection and assessment prior to or in lieu of establishment of a FRMAC. • Maintains and improves the ability of the Nuclear/Radiological Advisory Team to provide advice and limited technical assistance, including search, diagnostics, and effects prediction, as part of a Domestic Emergency Support Team. • Maintains and improves the ability of the Search Response Teams to provide covert search capability using local support for initial nuclear search activities. • Maintains and improves the ability of the Joint Technical Operations Team to provide technical operations advisory support and advanced technical assistance to the Federal primary or coordinating agency, provide extended technical support to other deployed operations through an emergency response home team; perform nuclear safety reviews to determine safe-to-ship status before moving a weapon of mass destruction (WMD) to an appropriate disposal location; and accept custody of nuclear or radiological WMD on behalf of DOE and provide for the final disposition of these devices. • Maintains and improves the ability of Radiological Triage to determine through remote analysis of nuclear spectra collected on-scene if a radioactive object contains special nuclear materials.

Agency	Additional Responsibilities
DOE (Continued)	• Assigns a Senior Energy Official (SEO) for any response involving the deployment of the DOE/NNSA emergency response assets. The SEO will integrate into an appropriate position in the Unified Command structure, and is responsible for the coordination and employment of these assets at the scene of a radiological event. The deployed assets will work in support of and under the direction of the SEO.
Department of Health and Human Services (HSS)	(See the ESF #8 Annex for additional information.) • Collects samples of agricultural products to monitor and assess the extent of contamination as a basis for recommending or implementing protective actions (through the FRMAC). • Provides advice on proper medical treatment of the general population and response workers exposed to or contaminated by radioactive materials. • Provides available medical countermeasures through deployment of the Strategic National Stockpile. • Provides assessment and treatment teams for those exposed to or contaminated by radiation. • Provides advice and guidance in assessing the impact of the effects of radiological incidents on the health of persons in the affected area. • Manages long-term public monitoring and supports follow-on personal data collection, collecting and processing of blood samples and bodily fluids/matter samples, and advice concerning medical assessment and triage of victims. Tracks victim treatment and long-term health effects.
Department of Homeland Security/Domestic Nuclear Detection Office (DNDO)	• Supports the deployment of an enhanced global nuclear detection system to detect and report on attempts to import, possess, store, transport, develop, or use an unauthorized nuclear explosive device, fissile material, or radiological material in the United States. • Through the DNDO Joint Analysis Center, provides a coordinated technical adjudication of a nuclear/radiation detection alarm, and recommends Federal asset responses as required. • Coordinates the national technical nuclear forensics laboratory
Department of Homeland Security/Federal Emergency Management Agency (FEMA)	• Serves as the annex coordinator for this annex.

Agency	Additional Responsibilities
Department of Homeland Security/Customs and Border Protection (DHS/CBP)	• For incidents at the border, maintains radiation detection equipment and nonintrusive inspection technology at ports of entry and Border Patrol checkpoints to detect the presence of radiological substances transported by persons, cargo, mail, or conveyance arriving from foreign countries. • Through its National Targeting Center, provides extensive analytical and targeting capabilities to identify and interdict terrorists and WMD. • The CBP Weapons of Mass Destruction Teleforensic Center provides 24/7 support to DHS/CBP and other Federal law enforcement personnel in the identification of interdicted suspect hazardous material. • The CBP Laboratory and Scientific Services staffs WMD Response Teams in strategic locations nationwide. • Through the Container Security Initiative, DHS/CBP personnel are stationed at major foreign seaports in order to detect and prevent the transport of WMD on container vessels destined to the U.S.
Department of Homeland Security/U.S. Coast Guard (USCG)	• Because of its unique maritime jurisdiction and capabilities, is prepared to provide appropriate security, command and control, transportation, and support to other agencies that need to operate in the maritime domain.
Department of the Interior (DOI)	• Advises and assists in evaluating processes affecting radioisotopes in soils, including personnel, equipment, and laboratory support. • Advises and assists in the development of geographic information systems databases to be used in the analysis and assessment of contaminated areas, including personnel and equipment. • Provides liaison between federally recognized tribal governments and Federal, State, and local agencies for coordination of response activities. Additionally, advises and assists DHS on economic, social, and political matters in the U.S. insular areas should a radiological incident occur in these areas.
Department of Labor/Occupational Safety and Health Administration (OSHA)	• Provides advice and technical assistance to DHS, the coordinating agency, and State, tribal, and local governments concerning the health and safety of response workers implementing the policies and concepts in this annex.
Department of State (DOS)	• Serves as the U.S. Government lead in notification of the IAEA in accordance with the Convention on Early Notification in the Case of a Nuclear Accident. • Serves as the U.S. Government lead in requesting or accepting assistance in accordance with the IAEA Convention on Assistance in the Case of a Nuclear Accident or a Radiological Emergency.
Department of Transportation (DOT)	(See the ESF #1 – Transportation Annex for further information.) • Provides technical advice and assistance on the transportation of radiological materials and the impact of the incident on the transportation infrastructure.
Department of Veterans Affairs (VA)	• Provides medical assistance using the Medical Emergency Radiological Response Team, which provides direct patient treatment; assists and trains local health care providers in managing, handling, and treatment of radiation exposed and contaminated casualties; assesses the impact on human health; and provides consultation and technical advice to local, State, and Federal authorities.

Agency	Additional Responsibilities
Environmental Protection Agency (EPA)	(See ESF #10 Annex for additional information.) • Provides resources, including personnel, equipment, and laboratory support (including mobile laboratories) to assist DOE in monitoring radioactivity levels in the environment. • Assists in the development and implementation of a long-term monitoring plan and long-term recovery plan. • Provides nationwide environmental monitoring data from the RadNet for assessing the national impact of the incident. • Develops Protective Action Guidance manuals in coordination with the FRPCC. • Recommends acceptable emergency levels of radioactivity and radiation in the environment. • Prepares health and safety advice and information for the public. • Estimates effects of radioactive releases on human health and the environment. • Provides, in cooperation with other Federal agencies, the law enforcement personnel and equipment to conduct law enforcement operations and investigations for nuclear/radiological incidents involving criminal activity that are not terrorism related.
Nuclear Regulatory Commission (NRC)	• Provides technical assistance to include source term estimation, plume dispersion, and dose assessment calculations. • Provides assistance in Federal radiological monitoring and assessment activities.

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